PLANT IMMIGRANTS

Issued monthly by the Office of Foreign Seed and Plant Introduction, Bureau of Plant Industry, Department of Agriculture.

No. 94. February, 1914.

Matter in these multigraphed sheets must not be published without special permission.

Genera Represented in This Number.

Acrocomia	37382	Holcus	37114-116
Aralia	37145-152	Linum	37085-089
Aristoclesia	37384	Myrciaria	37094
Cucurbita	37132-133	Phaseolus	37078
Diospyros	37168-213	Triticum	37154
Dolichos	37081		37157
Garcinia	37381		37160
Glycine	37062-063		37164
	37074-075		37167
	37077	Vigna	37104-110
	37080	Zea	37219
	37228-325	Undetermined	37392
	37326-356		
	37396-404		

PLATES: Brazilian grasses.

(NOTE: Applications for material listed in these multigraphed sheets may be made at any time to this Office. As they are received they are filed, and when the material is ready for the use of experimenters it is sent to those on the list of applicants who can show that they are prepared to care for it, as well as to others selected because of their special fitness to experiment with the particular plants imported.

One of the main objects of the Office of Foreign Seed and Plant Introduction is to secure material for plant experimenters, and it will undertake as far as possible to fill any specific requests for foreign seeds or plants from plant breeders or others interested.)

Acrocomia sclerocarpa. (Phoenicaceae.) 37382. Seeds of the macauba palm from Lavras, Minas Geraes, Brazil. "A beautiful pinnate leaved species which grows wild in this region. The trunk reaches a height of 50 feet or more and is profusely covered with sharp spines, varying from 1 to 4 inches in length, and black in color. Its distribution in this part of Brazil is very wide; we have observed considerable groves at altitudes of 900 meters, which leads to the belief that it may prove adaptable to southern California. The leaves are very graceful and somewhat finer than *Cocos plumosa*. As an ornamental plant this palm should be of value. The fruit is produced in clusters sometimes weighing 30 or 40 kilos. The hard kernel is surrounded by a thick layer of white starchy material, somewhat mucilaginous in texture. Hogs are very fond of the fruits. According to Mr. Hunnicutt of the Escola Agricola, they will eat them in preference to corn, and they are said to be very fattening." (Dorsett, Popenoe and Shamel introduction.) For distribution later.

Aralia cordata. (Araliaceae.) 37145-152. Roots of the udo from Yokohama, Japan. Purchased from L. Boehmer and company. Ten of the best udo varieties from Kanagawa ken, introduced for comparison with the varieties already introduced and for selection. For distribution later.

Aristoclesia esculenta. (Clusiaceae.) 37384. Seeds from Lavras, Minas Geraes, Brazil. "From a row of trees growing in the grounds of the Instituto Evangelico. The fruit which is now ripe (January 22) is called Limao do matto (lemon of the forest) by the natives. The trees are 20 to 25 feet in height, pyramidal in form, and handsome in appearance with their deep green glossy foliage. The leaves are 4 to 6 inches in length, oblong lanceolate, acute at the apex, thick, stiff, the veins scarcely visible on the upper surface, prominent beneath. In general characteristics the fruit is almost identical with that of *Rheedia brasiliensis*. The form is elliptical, frequently tapering at both ends and even prominently pointed at the apex. The length is about 2 inches, diameter 1½ inches, color bright orange yellow. Stem three-fourths to one inch in length, stout; skin about one-eighth inch or more in thickness, terebinthaceous and disagreeable in taste, rather brittle, easily separable from the snowy white pulp which surrounds the seeds. The flavor is acid unless the fruit is almost over-ripe, and strongly resembles that of *Lansium domesticum*. The character of the pulp is similar to that of the mangosteen, melting, juicy and beautiful in appearance. The seeds vary from 1 to 3, 2 being the commonest number, and are oblong-oval in form,

about 1 inch in length, adhering closely to the pulp. When cut a yellow gamboge oozes out of them. Boys are very fond of this fruit, but the Americans here do not care for it. It is said to make a very superior doce or preserve." (Dorsett, Popenoe and Shamel introduction.) For distribution later.

Cucurbita pepo. (Cucurbitaceae.) 37132-133. Seeds of squashes from Rome. Presented by Dr. Gustav Eisen. "Zucchetta nana 'Cerbero' and 'Romana.' Peculiar kinds of squashes. These squashes are eaten green, and while the flower is yet adherent to the fruit, and never when the fruit is ripe, at least I have never seen it eaten at that stage. Used stewed, fried, etc., in many different ways, like squash or green peas. It is most delicious when boiled in fresh butter and is fully equal to any other fresh vegetable in this country. Many eat the flowers when the fruit is between six to ten inches, always while green." (Eisen.) For distribution later.

Diospyrus kaki. (Ebenaceae.) 37168-213. Cuttings of 45 varieties of Japanese persimmon from Okitsu, Japan. Presented by Mr. T. Tanikawa, in charge of the Government Horticultural Experiment Station. "We take great pleasure in sending you scions of all the kakis which we now have in our garden. These kakis were gathered from several localities of this country as promising varieties. We must confess that it is very difficult to collect all the varieties named in our 'Special Bulletin No. 28' because many of them are seedlings of some varieties and named by the finder or the cultivator. Such kakis are almost always inferior in quality and too scarce in number to be recognized as a variety. For these reasons we regret that we cannot send such kakis to you." (Tanikawa.) For distribution later.

Dolichos lablab. (Fabaceae.) 37081. Seeds of the Bonavist bean from Tientsin, China. Presented by Dr. Yamei Kin, Pei-Yang Woman's Medical School and Hospital. "The common name is 'old woman's ear' and it is a specialty of the north. The ripe beans can be used like any other bean, but are generally used in the pod like string beans. As it grows readily and likes the cold weather, just so that it does not actually freeze the blossoms, it thus provides a green bean when the other string beans are gone. In cooking it the object is not to make it soft but just to plunge it into boiling hot water and not much more than scald it, so that it still remains crisp enough for a salad, then it is dressed with vinegar and oil. It should be grown on a trellis. The pods when full grown measure

from four to six inches long and about a couple of inches across, but people generally do not wait until they are full grown but begin to eat them when young so that the whole pod can be used." (Kin.) For distribution later.

Eugenia klotzschiana. (Myrtaceae.) 37392. Seeds of the pera do campo from Lavras, Minas Geraes, Brazil. "*Cabacinha do campo* or *pera do campo*. A pear shaped, very fragrant fruit produced by a small wiry shrub occasionally seen on the campo here. The plant grows to a height of 4 or 5 feet under favorable conditions, with very few branches; when growing on land that is pastured it grows only two feet high, with many unbranched stems arising from the ground. The leaves are oblong lanceolate, rather hard and tough, tomentose beneath, and alternative. The fruits are strikingly similar in appearance to a small russet pear. They vary from 2 to 3 inches in length, and are russet brown in color, with a thick tomentum on the surface, the skin is thin and surrounds a whitish, very juicy and aromatic pulp, so fragrant that its odor can be detected several yards away. The flavor is rather acid but very aromatic. The seeds vary from 1 to 3 or 4, and are oval or somewhat irregular in shape, about one-half inch in diameter. The proportion of seed to flesh is small for a wild fruit. The season is said to be November and December; there are very few fruits left now (January 23). A very superior *doce* is said to be made from this fruit, which seems on the whole unusually promising for trial in the mildest parts of the United States." The botanical determination of this fruit was not certain when the first page of this bulletin was printed. (Dorsett, Popenoe and Shamel introduction.) For distribution later.

Garcinia vidalii. (Clusiaceae.) 37381. Seeds of the libas from Manila. Presented by Mr. O. W. Barrett, Chief, Division of Horticulture, Bureau of Agriculture. "This characteristic species of Garcinia is a native of the Province of Rizal, Luzon. It is easily recognized by its rather large, numerously veined leaves which are broadly rounded at the apex and frequently retuse. It is a tree attaining a height of about 12 meters, the branches and branchlets being stout and somewhat angular, brownish or yellowish, rugose when dry. The leaves are opposite, and obovate or elliptical-obovate, 15 to 25 cm. long and 6 to 14 cm. wide. The flowers are 5-merous, the staminate ones with stout, 4-angled pedicels about 5 mm. long. The fruit is fleshy, greenish and smooth when fresh, subglobose, 5-6 cm. in diameter. Edible." (Merrill in Philippine Journal of Science, vol. 3, p. 361, 1909.) For distribution later.

Glycine hispida. (Fabaceae.) 37062-063, 37074-075, 37077, 37080, 37228-325, 37326-356, 37396-404. Seeds of soy beans from various parts of Manchuria and Korea. These introductions include the largest collection of Korean soy bean varieties ever brought to this country, 98 varieties with full descriptions and native names being sent in by the American consul at Seoul, Korea. Other collections are from Pyeng-yang, Korea, and from Harbin, Manchuria, and Tientsin, China. All introduced in the effort to bring together all valuable Manchurian and Korean varieties. For distribution later.

Holcus sorghum. (Poaceae.) 37114-116. Seeds of sorghums from Zaria, northern Nigeria. Presented by Mr. K. T. Rae, Department of Agriculture. Three of the most commonly grown varieties introduced for the work of the Office of Forage Crop Investigations in bringing together the best West African varieties. For distribution later.

Linum usitatissimum. (Linaceae.) 37085-089. Flax seeds from Adis Ababa, Abyssinia. Received through the British Legation, in the absence of an American consul. Five varieties of flax introduced because of the special promise of certain earlier introductions of Abyssinian flax. For distribution later.

Myrciaria edulis. (Myrtaceae.) 37094. Seeds of the cambucá from Rio de Janeiro. "A very interesting myrtaceous fruit, closely resembling in foliage and general character of fruit the jaboticaba. Leaves lanceolate-elliptical, acuminate, deep green above, lighter green beneath, 4 to 5 inches long. Fruits oblate in form, 2 inches in width and 1½ inches long, sessile, surface smooth, bright orange in color. Skin thin, outer flesh one-fourth inch thick, tough and acid, inner pulp or edible portion surrounding the seed about the same thickness, soft, translucent, juicy, of average subacid flavor, somewhat resembling that of *Passiflora edulis*. Seed oval, compressed laterally, one-eighth inch long. For trial in Florida and California. (Dorsett, Popenoe and Shamel introduction.) For distribution later.

Phaseolus radiatus. (Fabaceae.) 37078. Seeds of bean from Tientsin, China. Presented by Dr. Yamei Kin, Pei-Yang Woman's Medical School and Hospital. "Lü to. This makes a better quality of starch than anything else. It is curious that in China the starch obtained from maize or wheat is not valued as much as that made of this bean for laundry purposes. They also make a vermicelli from the starch of this bean, and one can at once distinguish

it from that made from ordinary starch by the fact that it keeps its clearness and shape much better no matter how much it is boiled. It also has a better flavor and good keeping qualities. Perhaps it might be an addition to the laundry starches of America as I fancy it would take a much better gloss as it is harder than ordinary starch and would not need so much paraffin added to make a gloss. I doubt if the American palate would care for the vermicelli, as it is clear like glass and the long strings are most terribly slippery to eat, worse than the round Italian spaghetti." (Kin.) For distribution later.

Vigna sinensis. (Fabaceae.) 37104-110. Seeds of cowpeas from Zaria, Northern Nigeria. Presented by Mr. K. T. Rae, Department of Agriculture. Seven varieties of cowpeas introduced for the work of the Office of Forage Crop Investigations in bringing together the principal varieties of cowpeas from all parts of Africa. For distribution later.

Zea mays. (Poaceae.) 37219. Seeds of corn from Puerto Bertoni, Paraguay. Presented by Dr. Moises S. Bertoni. "Seeds of a new variety of Early Hard Maize, *communis minor.* This is a new variety which we believe will be of great interest in those countries in which the early European maizes give good results with difficulty. It is a new variety which we have obtained in this Agronomic Station by hybridization and selection of various species of hard and soft maizes of different degrees of earliness. It is almost as early a ripener as the variety Early Soft Maize, which serves as the base, and almost as hard and good as the Hard Canary Maize with which it was first crossed. It is notably hardy and drought resistant. The plant is small and of good production." (Bertoni.) For distribution later.

NOTES FROM CORRESPONDENTS ABROAD.

Mr. Frank N. Meyer writes from Tai an fu, Shantung, China, March 29, 1914. "Yesterday I returned from a hurried trip to Feitcheng, bringing back with me eight grafted trees of the famous Fei peach and herewith I am sending you via the American Consul-General at Shanghai, one of these grafted trees and also a bundle of scions. Would you kindly have them given the best of care. I have also sent to Chico a similar shipment, through the American Consul-General at Shanghai, and still have on hand the other six trees which I will send from Tientsin by freight to Chico, together with another lot of bulky stuff. Then also I am sending you, through the same channel a package

of fresh ginger rhizomes for planting, No. 1214. The peach material is labeled 1213 and I am enclosing the Inventory notes, describing the shipment. We had much trouble in getting these peaches as the people asked the most fabulous prices, for instance 40 and 50 dollars a tree. My interpreter, through some diplomatic dealings, obtained a plot containing eight trees, for forty dollars. As a result we had to leave Feitcheng rather hurriedly because the relatives of the man who made the deal had not been consulted and they wanted to take the trees back or destroy them. Well two are now on the road to America and the others go with me tomorrow. We hope to take the 3 A. M. train for Tientsin so as to get the Hawtrees and other plants off for America."

Mr. Frank N. Meyer writes from Peking, China, April 7th, 1914. "As you will notice, I have landed again in old Peking and received a cordial welcome from my many friends here. Dr. Reinsch, our Minister, wanted to hear straight away what sort of a trip I had. Well, I cannot say that my trip has been a bad one, for so far as collecting of material is concerned, for I have obtained material of some very important things like all these varieties of Persimmons; these very large Jujubes; large-fruited Chinese haws, trees of the famous Fei peach; nuts and scions of an apparently disease-resistant form of the Chinese chestnut; remarkable varieties of tree-peonies; a new lumber tree (Catalpa bungei) besides several minor things.

The one hundred and twenty photographic exposures I made on this past trip were developed and this morning I obtained the films and prints. There are some striking ones among them, which will serve their purpose well of illustrating some coming new industries. The large fruit-jujubes have come out especially well.

Then I will have to announce to you the coming into my possession of 175 pieces of mail, among which a goodly number of letters from you, for which I tender my best thanks. Some weeks will pass before I am through with it all.

SCIENTIFIC STAFF OF THE OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION OF THE BUREAU OF PLANT INDUSTRY.

Washington Staff.

David Fairchild, Agricultural Explorer in charge.
P. H. Dorsett, Plant Introducer in charge of Plant Introduction Field Stations.
Peter Bisset, Plant Introducer in charge of Foreign Plant Distribution.
Frank N. Meyer and F. W. Popenoe, Agricultural Explorers.
George W. Oliver, Plant Breeder and Propagator.
H. C. Skeels, Scientific Assistant, in charge of Seed Collections and Office Herbarium.
R. A. Young, Scientific Assistant, in charge of Dasheen Investigations.
S. C. Stuntz, Botanical Assistant, in charge of Explorers' Notes, Foreign Correspondence, and Publications.
E. L. Crandall, Photographer.

Staff of Field Stations.

R. L. Beagles, Assistant Farm Superintendent in charge of Chico, Calif., Plant Introduction Field Station.
H. Klopfer, Plant Propagator.
J. M. Rankin, Assistant Farm Superintendent in charge of Rockville (Yarrow), Md., Plant Introduction Field Station.
Edward Goucher, Propagator.
Edward Simmonds, Gardener and Field Station Superintendent in charge of Miami, Fla., Subtropical Plant Introduction Field Station.
W. H. F. Gomme, Assistant Farm Superintendent in charge of Brooksville, Fla., Plant Introduction Field Station.
S. A. Beach, Field Station Superintendent in charge of Ames, Iowa, Plant Introduction Field Station.
J. H. Allison, Expert.

Collaborators.

Mr. Aaron Aaronsohn, Haifa, Palestine.
Mr. Thomas W. Brown, Cairo, Egypt.
Dr. Gustav Eisen, California Academy of Sciences, San Francisco, Calif.
Mr. E. C. Green, Coroata, Maranhao, Brazil.
Mr. A. C. Hartless, Saharanpur, India.
Mr. H. Harold Hume, Glen St. Mary, Fla.
Mr. Barbour Lathrop, Chicago, Ill.
Mr. William S. Lyon, Manila, Philippine Islands.
Mr. William H. Raynes, Tallahassee, Fla.
Mr. J. F. Rock, Honolulu, Hawaii.
Miss Eliza R. Scidmore, Yokohama, Japan.
Mr. Charles Simpson, Little River, Fla.
Dr. L. Trabut, Algiers, Algeria.
Mr. E. H. Wilson, Arnold Arboretum, Jamaica Plain, Mass.

Panicum spectabile(?) Capim de Angola.

A load of grass being carried into the town of Bom Fim from the adjacent valley where it is grown. In the state of Bahia Angola grass, or capim de Angola, as it is known in Portuguese, is one of the commonest and most highly esteemed forage crops. It is fed to both horses and cattle. While generally grown on low wet ground near the coast, in the interior it is often seen on comparitively dry land. Photograph by P. H. Dorsett, Bom Fim, state of Bahia, Brazil, February 25, 1914, No. 2079.

Andropogon rufus. Capim Jaragua.

A view across a small field of jaragua grass in the edge of the town of Pirapora. In this region, as well as other sections of southeastern Brazil, jaragua is one of the principal forage plants, although usually considered inferior in quality to capim gordura (Melinis minutiflorus). It is a perennial grass, growing to a height of six feet or more when not cut promptly, and said to be resistant to cold and prolonged rains. According to Pio Correa it contains 2.23% of digestible protein. Photograph by P. H. Dorsett, Pirapora, Minas Geraes, Brazil, February 10 1914. No. 1751.

Chloris elegans. Capim catingueiro.

A rare grass cultivated in the Horto Florestal at Joazeiro, where it is considered by Dr. Leo Zehntner, the director, an especially promising species. It grows to a height of about three feet, producing seed heads of good size. The fact that it has proved adapted to semi-arid regions makes it of interest to farmers in the Southwestern United States. Its food value is believed by Dr. Zehntner to be high. From photograph by F. W. Popenoe, Joazeiro, state of Bahia, Brazil, February 24, 1914, No. 2061.

Panicum spectabile(?) Capim de Angola.

Planting capim de Angola on the municipal farm at Bahia, Brazil. This is an especially wet peice of ground; instead of planting in the ordinary manner the soil is stirred up with hoes and the grass, after being scattered over the surface, is tramped in with the feet. Ditches are required to drain off the surface water, which accumulates rapidly. Ten days from planting the field is in active growth. Photograph by P. H. Dorsett, Bahia, Brazil, March 10 1914. No. 2143.